

Qlarant Provides Powerful Analytics and Extensive Expertise for Maximizing COVID-19 Contact Tracing Effectiveness

Qlarant Has a Rich History of Identifying and Resolving Risks

The COVID-19 pandemic has dramatically changed the world. Though the way we live and work may never be the same, effective risk identification, prioritization, and resolution are critical steps in returning to safety and productivity. Qlarant has ***subject matter expertise and analytic tools*** designed to ***identify and measure pandemic-related risk*** and ***assist in effective mitigation***.

Qlarant is ***a national leader*** in healthcare quality improvement, program integrity, risk management, and innovative technology solutions. We have ***over 45 years of success*** in improving quality and efficiency and ***rooting out fraud, waste, and abuse*** (FWA) in large health systems—including Medicare and Medicaid. Qlarant combines subject matter expertise with data science and analytics ***to identify and resolve risks***—working with federal, state, and commercial entities whose programs reach every corner of the nation. We bring this ***knowledge and discipline*** to our pandemic risk-mitigation solutions.

Our team of ***200 subject matter experts***, analyze data, discover potential vulnerabilities, and recommend courses of action to mitigate risk. With ***82 data and claims analysts, 12 PhD data scientists, and more than 100 skilled fraud investigators***, we can address all aspects of these risks—potential or confirmed—and ***provide meaningful solutions***.

While much about COVID-19 and its spread remains unknown, it is clear that ***early detection followed by***



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Profile
Quality Improvement • Patient Safety • Utilization Review • Person-Centered Review • Health Disparities • External Quality Review • Fraud, Waste and Abuse • Medical Claims Review • Data Analytics and Reporting • Predictive Modeling • Training and Education • Root Cause Analysis • Agile CxO Transformation
Populations Served
Intellectual and Developmental Disabilities • Medicaid • CHIP • Dental • Medicare • Aging • Foster Care • Long-Term Care • Veterans • Behavioral Health
Designations
CMS Federally Designated QIO-like Organization • ISO 9001:2015 • URAC Health Utilization Management • CMMI Maturity Level 3 • SOC 2 Compliant • Agile CxO Transformation Partner
Survey Experience
Georgia • Florida • South Carolina
Headquarters
Easton, Maryland Established in 1973. Not for profit.

contract tracing and testing is an essential and effective mitigation strategy. Data-driven analyses and user-friendly visualizations assist health care leaders in stopping the spread of COVID-19. Tracing the virus is not only critical to understanding the current pandemic, but essential to developing strategies to prevent or mitigate future pandemics.

By employing Qlarant’s risk-visualization and analytic tools, government and business leaders—as well as individuals—can **gain the confidence needed to know when it is safe** to reopen or return to work.

Auditing and Investigating. Audits and investigations are all about **acquiring** and **aggregating information** to prove or refute a concern—in this case, if or where there is a COVID-19 risk, and where it may be heading. Qlarant has **extensive experience** with the workflows and data elements that underlie audit and investigative processes, and we understand the opportunity to bring forth innovative technology to improve the auditing process. We have conducted **thousands of program integrity** and **quality improvement audits** and **investigations** to include call center complaint-handling; detailed interviews and reporting; on-site audits and investigations; and desk reviews. Using our **experienced auditors** and **investigators**, we are able to root out the services related to fraud and abuse. Having strong analytics is the foundation of an effective approach to mitigating the risks emanating from the COVID-19 pandemic. Validating the analytic output to **confirm the risk and avoid unnecessary and misapplied mitigations is essential to preserving resources**. Qlarant’s COVID-19 experience involves building algorithms directly associated with existing services (e.g., respiratory panels, testing, etc.) which are at risk for abuse due to the rapidly expanding COVID-19 patient base. Newly identified attributes and filters identified from audits and investigations are used to **continuously refine and improve** algorithms and dashboards.

Qlarant is ready to serve as your partner in the following broad areas, customizable to suit your specific need(s):

- **Auditing/Investigating**
- **Contact Tracing/Call Centers**
- **Geo-Mapping**
- **Analyses/Data-Driven Dashboards**
- **Link Analysis**
- **Mobile Technology/Data Integration**
- **RIViR™ Software Solution**

Contact Tracing/Call Centers. Our call center competency—honed after **years of experience mitigating FWA**—is expertly designed to gather information from sources across the nation and funnel it to the analytic and tracing functional areas to determine emerging hot-spots and spikes. By building on existing Qlarant platforms, we are able to provide call center resources and technology to support COVID-19 tracing efforts. Moreover, Qlarant technologies will enable **secure mobile access** to external resources including state and federal data repositories.

With our project oversight experience, Qlarant is adept at **launching and managing large-scale government programs** on short notice and has the staff and skills required to operationalize a contact tracing program to include:

- hiring, onboarding, and training staff on interviewing techniques and conducting audits and case investigation;
- creating data collection tools;

- deploying a full-service call center including state-of-the art analytics, triage, and tracking systems;
- and analyzing data to spot/mitigate risks and continuously improve program processes.

Qlarant currently holds several state contracts that require **person-centered interviews**, using a variety of interview tools and techniques to **gather experiences and opinions** of persons with intellectual/developmental disabilities to evaluate the quality of services these individuals receive. Qlarant subject matter experts on health disparities and social determinants of health guide interview staff training and the creation of interview tools and techniques **to ensure cultural sensitivity and appropriateness** and to account for unique communication styles and needs.

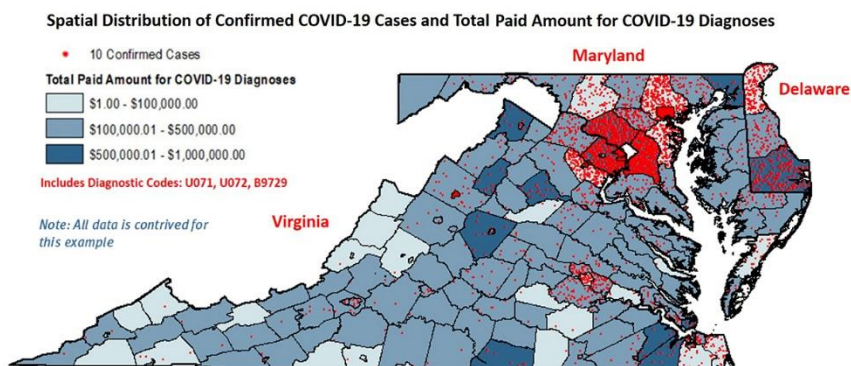
Qlarant also maintains several program integrity contracts for the **Centers for Medicare & Medicaid Services (CMS)**. Our audit and investigation competencies directly relate to, and greatly enhance, our ability to have real-time collection of data, observations, and information that will improve the ability to identify emerging concerns, quantify the risk, and identify the path and/or escalation of the threat. The Investigations Medicare Drug Integrity Contract utilizes a call center to receive and process complaints of Medicare fraud, waste, and abuse on a national scale. Qlarant will bring the same **skills, discipline, and technology** to deploying state or community-level COVID-19 contact tracing programs.

All Qlarant contracts incorporate data collection tools that allow for the **easy creation of actionable data analyses** that drive continuous quality improvement in the programs we serve and findings are compiled, analyzed, and reported in a **timely and confidential** manner.

Geo-mapping Analyses/ Data-Driven Dashboards.

One of the first pieces of information gathered at a testing site or by a call center is the physical living address of each person who has the COVID-19) or who have been in contact with infected

individuals. Pinpointing the spatial coordinates of that address in the United States is possible through use of geocoding systems as provided by the U.S. Census Bureau's Topologically Integrated Geographic Encoding and Referencing or TIGER/Line data¹. This system finds the geolocation of an address either through online map tools via use of an Application Programming Interface (API), or analytical suites such as SAS®. By mapping and analyzing the geographic location of individuals identified as positive for the virus, **a wealth of information** can be generated to assist with resource allocation and understanding the factors affecting community spread.



¹ TIGER/Line Shapefiles. U.S. Census Bureau,
<https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html>

Qlarant leverages **geo-spatial analyses** for work concerning health care FWA using tools like *ArcGIS*, and the same principles apply to tracing COVID-19. Heat maps showing new occurrences of positive or presumptive positive COVID-19 patients can guide public health administrators in allocating resources, focusing efforts on phone-based tracing as well as locating suitable testing sites. These kinds of maps, based solely on patient address data, can also help identify retail stores, public use areas, or other local spots that might be responsible for community spread. Identifying a specific grocery or convenience store that might be contaminated or that has an infected employee can **help to keep new cases from ballooning out of control**.

In addition, Qlarant's **predictive modeling expertise can provide valuable proactive information** about emerging virus hotspots to assist administrators with resource assignment and allocation. By using data already collected on the location and the date of positive or presumptive positive COVID-19 cases, along with machine learning (ML) algorithms, we can create geo-spatially based predictive models **to indicate the likelihood of new cases** in specific areas. This information could be extremely useful as the virus's spread evolves so that many future cases can be prevented.

Efficient allocation of resources will help to lower utilization and overall cost—benefitting patients and care-givers.

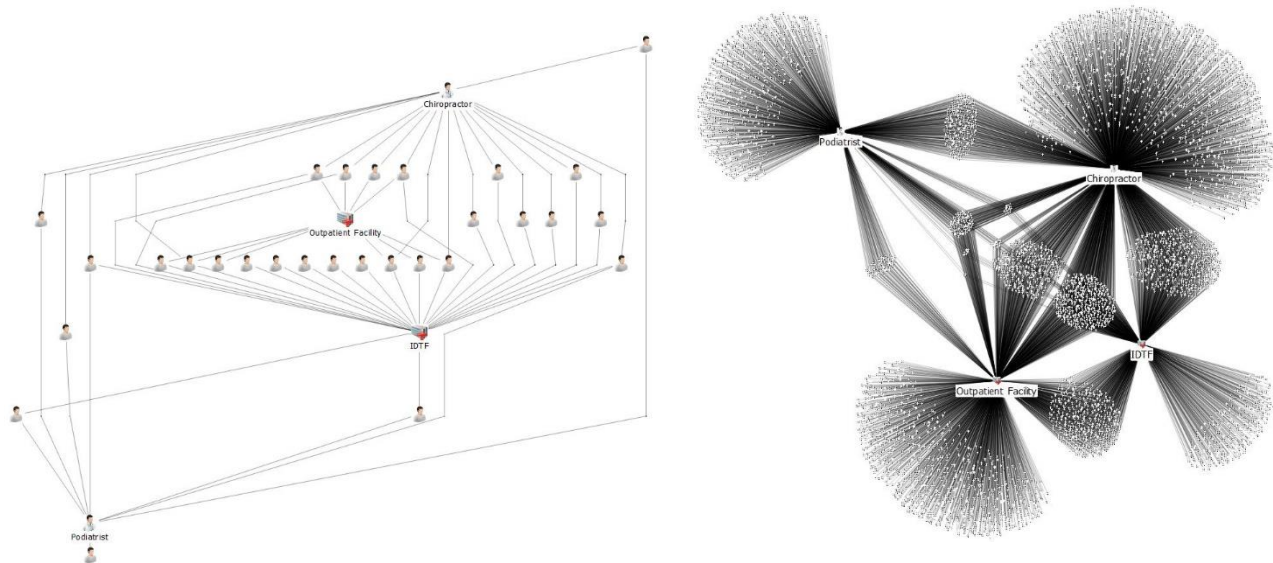
Qlarant's team of data scientists can create **data-driven algorithms to identify risk** and assist leaders from all sectors (government, healthcare, business) in prioritizing and coordinating a risk response. Furthermore, Qlarant can summarize data inputs into **easily digestible, customized visualizations**, or "dashboards," to allow leaders to see where problems arise so that actions may be taken before problems become unmanageable. These dynamic dashboards do not focus solely on one problem or risk. For example, in addition to displaying the number of confirmed COVID-19 cases in a particular geographic region, it may also show: the number of available ICU beds, availability of testing, confirmed testing locations, healthcare workforce availability, and more. There is **no limit to the number of data inputs** in a customized, actionable dashboard—designed to guide community decision-makers.

Link Analysis. Qlarant has the capability to perform a variety of link analyses, from simplistic to complex. We have SAS® program templates that link subjects through shared addresses, names, phone numbers, tax IDs and emails. We have completed more complex link analyses by identifying targets with common ownership, high volumes of shared beneficiaries and relationships with known suspect targets. Where the data is available, we have **the capability to link multiple healthcare programs together** to find billing anomalies beyond a single dataset. Finally, we have completed many projects driven by beneficiary analytics which link or group beneficiaries by a variety of different attributes. Pertinent to COVID-19, there may be value in performing link analyses on beneficiary diagnosis history, healthcare service history, age, geography, and other key attributes.

Tracing the spread via social links could **pinpoint anyone the COVID-19 patient interacted with** using existing data (e.g., eligibility and claims data) and other publicly available warehouses. Qlarant could detect recipients who tested positive for COVID-19 or had a COVID-19 test and identify all associated contacts based on available data, including:

- contact by shared or community address;
- contact by shared provider where a recipient received treatment on the same day (or up to 14 days prior);
- and/or contact at the same practice/facility where the COVID-19 beneficiary was tested within the virus incubation timeframe.

This type of link analysis expands to detect more contacts as new patients test positive. As other useful data sources become available, such as CDC details or call centers and tip lines, the link analysis becomes more **comprehensive, inclusive, and multiplies in effectiveness**.



Link Analysis Example: The first diagram shows 29 patients who attended appointments at one or more of the following health care facilities within the same week: a podiatry office, an outpatient hospital facility, an independent diagnostic testing facility (IDTF), and a chiropractic office. These 29 patients are all unknowingly positive for COVID-19.

The second diagram shows 5,454 patients who were not positive for COVID-19 who attended the same facilities as the 29 COVID-19 positive patients within the same week. Due to their exposure to the 29 COVID-19 positive individuals, these patients are now possibly infected. All data is contrived.

Mobile Technology and Data Integration. Qlarant utilizes advanced mobile information technology devices to enable field personnel to **upload information** to case management systems **immediately**. Qlarant uses tablets and mobile devices to send investigative data such as site-visits or interview outcomes over secured lines. Our custom mobile device technology integrates with **Qlarant-developed** case management and visualization technology.

Mobile devices like smartphones and tablets are ubiquitous in the professional workplace, and are intuitively easy for many professionals to use. They **offer tremendous computing power and functionality** to auditors/tracers who engage in field data collection. These devices provide auditors/tracers with a lightweight medium that contains tools like internet connectivity, high-definition cameras, data storage, and smart applications.

Qlarant uses **data gathered from mobile technologies** to display required reports and findings and the auditor/tracer can **upload completed reports and results** to the “cloud” before exiting an audit site. Leveraging Qlarant’s capabilities to encrypt data at rest, auditors/tracers can also save reports on the mobile device where necessary. In some locations, wireless connectivity may not be available for the auditor/tracer to transmit the report. With Qlarant technology, the **auditor/tracer could complete the report even in a disconnected environment**. When connectivity is restored, the report will automatically synchronize with the cloud.

Qlarant can integrate trusted websites and systems into contact tracing mobile solutions, recognizing that subscription and authentication by the auditor/tracer may be required in some cases. **Full integration with external sites can be achieved** through engineering and collaboration with the specified services. Several APIs and web services kits exist to enable **integration and customization by developers**. Where the specified data and functionality are available through the APIs, **a more robust integration** with Qlarant technologies can be engineered to present the tracer/auditor with a single point of entry for data collection and research.

The RIViR™ Risk Solution Suite for COVID-19

Qlarant’s **flexible, customizable, high-powered data analytics solution**—RIViR, which stands for Risk Identification, Risk Visualization, Risk Resolution—can tie together critical COVID-19 risk management and mitigation strategies and solutions in **one flexible platform**. Government and healthcare leaders managing the COVID-19 pandemic are making decisions based on disparate data sources manually movement of data from application to application. This can create losses in both time and accuracy. **RIViR’s carefully crafted algorithms generate meaningful results** based on factual data and combines data from various sources to meet specific needs. **RIViR** uses multi-layered data to **not only identify risk but to predict and prioritize risk**. By providing a single solution, **RIViR** eliminates redundancies and reduces the likelihood of errors—reducing costs, increasing the value of data, and driving to desired mitigation results with speed and precision. As leaders learn more about COVID-19 and how to manage the outbreak, new algorithms, and therefore new data assets and inputs, may be required. **RIViR is designed with uncertainty in mind**, allowing for easy addition, deletion, and reprioritization of algorithms.



To learn more about RIViR, <https://www.qclarant.com/solutions/data-science-technology/technology-solutions-products/>

**To learn more about how Qlarant can assist you
with COVID-19 mitigation, please contact:**

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